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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,335	12/23/2005	Makoto Ikeda	KNJ-215-A	3618

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EXAMINER	
GRAMLING, SEAN P	
ART UNIT	PAPER NUMBER
2875	

NOTIFICATION DATE	DELIVERY MODE
10/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/562,335	IKEDA ET AL.	
	Examiner	Art Unit	
	SEAN P. GRAMLING	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. Acknowledgment is made of Amendment filed June 30, 2008. Claims 1 and 5-6 are amended. Claims 1-20 are pending.

Claim Objections

2. **Claim 1** is objected to because of the following informalities: In lines 11-12, Applicant recites "the curved surfaces of the oval arc curves or paraboloid curves". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2 and 5-6** are rejected under 35 U.S.C. 102 (b) as being anticipated by *Pelka et al* (US 2002/0114168).

5. Regarding claim 1, Pelka discloses an elongate, bar-shaped light guide having an end face 20 at a longitudinal end thereof, as well as a light-emitting face 18 and two internal side faces 84 extending in a longitudinal direction of the guide, wherein when light from a light source is incident on the end face, the light enters into the light guide,

is reflected by the internal side faces and is emitted from the light-emitting face, and a concentrating position of lights reflected by one side face and a concentrating position of lights reflected by the other side face are different from each other and wherein the internal side faces are curved surfaces of the oval arc curves or paraboloid curves and have differently shaped areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces (see Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]).

6. Regarding claim 2, the light guide in Pelka is integrally formed as a unitary member (see Figure 17).

7. Regarding claim 5, Pelka discloses an elongate, bar-shaped light guide having an end face 20 at a longitudinal end thereof, as well as a light-emitting face 18 and two internal side faces 84 extending in a longitudinal direction of the guide, wherein lights incident on the end face enter the light guide, are reflected by the internal side faces, and emitted from the emitting face, wherein sectional shapes of both of the internal side faces are oval arc curves, and a difference in focal distance between the oval arc curves causes focusing positions of lights reflected by the two internal side faces to be different (see Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]).

8. Regarding claim 6, Pelka discloses an elongate, bar-shaped light guide having an end face 20 at a longitudinal end thereof, as well as a light-emitting face 18 and two internal side faces 84 extending in a longitudinal direction of the guide, wherein lights incident on the end face enter the light guide, are reflected by the internal side faces, and emitted from the emitting face, wherein sectional shapes of the internal side faces

have two oval arc curved areas and focusing positions of reflected lights differ from one oval arc curve to the other, and wherein the curved surfaces of the oval arc curves have differently shaped areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces (see Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claims 1-20** are rejected under 35 U.S.C. 103 (a) as being unpatentable over *Ikeda* (US 2001/0035986) and further in view of *Pelka et al* (US 2002/0114168).

11. Regarding claim 1, Ikeda discloses an elongate, bar-shaped light guide 41 having an end face at a longitudinal end thereof, as well as a light-emitting face 41a and two internal side faces extending in a longitudinal direction of the guide, wherein when light from a light source is incident on the end face, the light enters into the light guide, is reflected by the internal side faces and is emitted from the light-emitting face, and the internal side faces are curved surfaces that are oval arc curves or paraboloid curves (see Figures 6 and 7 and paragraphs [0088]-[0093]). The concentrating position of lights reflected by one side face and a concentrating position of lights reflected by the other side face in Ikeda are not different from each other, and the internal side faces do

not have differently shaped areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces. However, Pelka specifically discloses a light guide having internal side faces that are oval arc curves or paraboloid curves wherein the concentrating position of lights reflected by one side face and a concentrating position of lights reflected by the other side face are different from each other, and the internal side faces have differently shaped areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces (see Pelka, Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to shape the internal side faces of the light guide 41 in Ikeda in the manner claimed and taught by Pelka in order to control the direction of light emitted from the light guide (see Pelka, paragraphs [0064]-[0065]).

12. Regarding claim 2, the light guide 41 in Ikeda is integrally formed as a unitary member (see Figure 6(b)).

13. Regarding claim 3, the light guide 41 in Ikeda includes two substantially half pieces connected together and oval arcs or paraboloids which constitute reflective faces are formed on the substantially half pieces (see Figures 6(c) and 7(a)-(b)).

14. Regarding claim 4, the light guide 41 in Ikeda includes a light scattering part 41b formed in connecting faces of the substantially half pieces together (see Figure 6(c) and 7(a)-(b)).

15. Regarding claim 5, Ikeda discloses an elongate, bar-shaped light guide 41 having an end face at a longitudinal end thereof, as well as a light-emitting face 41a and

two internal side faces extending in a longitudinal direction of the guide, wherein lights incident on the end face enter the light guide, are reflected by the internal side faces, and emitted from the emitting face, wherein sectional shapes of both of the internal side faces are oval arc curves (see Figures 6 and 7 and paragraphs [0088]-[0093]). A difference in focal distance between the oval arc curves in Ikeda does not cause focusing positions of lights reflected by the two internal side faces to be different. However, Pelka specifically discloses a light guide having internal side faces that are oval arc curves wherein a difference in focal distance between the oval arc curves in Ikeda does not cause focusing positions of lights reflected by the two internal side faces to be different (see Pelka, Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to shape the internal side faces of the light guide 41 in Ikeda in the manner claimed and taught by Pelka in order to control the direction of light emitted from the light guide (see Pelka, paragraphs [0064]-[0065]).

16. Regarding claim 6, Ikeda discloses an elongate, bar-shaped light guide 41 having an end face at a longitudinal end thereof, as well as a light-emitting face 41a and two internal side faces extending in a longitudinal direction of the guide, wherein lights incident on the end face enter the light guide, are reflected by the internal side faces, and emitted from the emitting face, wherein sectional shapes of the internal side faces have two oval arc curved areas (see Figures 6 and 7 and paragraphs [0088]-[0093]). The focusing positions of reflected lights in Ikeda do not differ from one oval arc curve to the other, and the curved surfaces of the oval arc curves do not have differently shaped

areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces. However, Pelka specifically discloses a light guide having internal side faces that are oval arc curves and the focusing positions of reflected lights in Pelka differ from one oval arc curve to the other, and the curved surfaces of the oval arc curves have differently shaped areas such that light emitted after being reflected by the two curved surfaces focus at different distances from the curved surfaces (see Pelka, Figures 1-3 and 16-17, and paragraphs [0025]-[0031] and [0062]-[0066]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to shape the internal side faces of the light guide 41 in Ikeda in the manner claimed and taught by Pelka in order to control the direction of light emitted from the light guide (see Pelka, paragraphs [0064]-[0065]).

17. Regarding claim 7, Ikeda discloses an image reader comprising the light guide according to claim 1 as modified by Pelka, a light source 44 provided at an end face at a longitudinal end of the light guide; and a lens array 205 for converging on a light receiving element 206 lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 202 housing the illuminating unit, the lens array and the light receiving element (see Figure 20 and paragraph [0128]).

18. Regarding claim 8, the image reader in Ikeda includes two illuminating units and the illuminating units are so arranged as to cause lights emitted from the light-emitting faces of the light guides thereof to irradiate the same area of an illuminated face of the document (see Figure 7(b)).

19. Regarding claim 9, Ikeda discloses an illuminating unit comprising the light guide according to claim 5 as modified by Pelka, a light source 44 provided at an end face at a longitudinal end of the light guide; and a lens array 205 for converging on a light receiving element 206 lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 202 housing the illuminating unit, the lens array and the light receiving element (see Figure 20 and paragraph [0128]).

20. Regarding claim 10, the image reader in Ikeda includes two illuminating units and the illuminating units are so arranged as to cause lights emitted from the light-emitting faces of the light guides thereof to irradiate the same area of an illuminated face of the document (see Figure 7(b)).

21. Regarding claim 11, Ikeda discloses an illuminating unit comprising the light guide according to claim 6 as modified by Pelka, a light source 44 provided at an end face at a longitudinal end of the light guide; and a lens array 205 for converging on a light receiving element 206 lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 202 housing the illuminating unit, the lens array and the light receiving element (see Figure 20 and paragraph [0128]).

22. Regarding claim 12, the image reader in Ikeda includes two illuminating units and the illuminating units are so arranged as to cause lights emitted from the light-emitting faces of the light guides thereof to irradiate the same area of an illuminated face of the document (see Figure 7(b)).

23. Regarding claim 13, the light guide 41 in Ikeda is shaped such that light is emitted in a line shape through the light-emitting face (see Figure 20 and paragraph [0002]).

24. Regarding claim 14, the light guide 41 in Ikeda is shaped such that light is emitted in a line shape through the light-emitting face (see Figure 20 and paragraph [0002]).

25. Regarding claim 15, the light guide 41 in Ikeda is shaped such that light is emitted in a line shape through the light-emitting face (see Figure 20 and paragraph [0002]).

26. Regarding claim 16, the light guide in Ikeda further comprises a bottom face opposite to the light-emitting face 41a and a light scattering part 41b formed with the bottom face (see Figures 7(a)-(b)).

27. Regarding claim 17, the light guide in Ikeda further comprises a bottom face opposite to the light-emitting face 41a and a light scattering part 41b formed with the bottom face (see Figures 7(a)-(b)).

28. Regarding claim 18, the light guide in Ikeda further comprises a bottom face opposite to the light-emitting face 41a and a light scattering part 41b formed with the bottom face (see Figures 7(a)-(b)).

29. Regarding claim 19, the light guide in Ikeda further comprises a bottom face opposite to the light-emitting face 41a and the light-emitting face includes portions disposed at different distances from the bottom face (see Figures 7(a)-(b)).

30. Regarding claim 20, the light guide in Ikeda further comprises a bottom face opposite to the light-emitting face 41a and the light-emitting face includes portions disposed at different distances from the bottom face (see Figures 7(a)-(b)).

Response to Arguments

31. Applicant's arguments filed June 30, 2008 with respect to the rejection of the claims in the previous Office Action have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of *Pelka* and *Ikeda*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. GRAMLING whose telephone number is (571)272-9082. The examiner can normally be reached on MONDAY-FRIDAY 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sean P Gramling
Examiner
Art Unit 2875

/SPG/

/Sharon E. Payne/
Primary Examiner, Art Unit 2875